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Clear Consensus, Ambiguous Commitment

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I.

Americans from every demographic, socioeconomic, racial, and ethnic category identify themselves as concerned about the environment, and most say that they have personally taken steps to reduce pollution or improve environmental quality in some way.[1] One of the most salient cultural and social signatures of the contemporary era in the United States, and throughout much of the world, has been the diffusion of a desire to protect, preserve, and restore features of the natural environment to a greater degree than current practices and policies do.[2] These environmental concerns are not only widely shared, they have been extended to become a wide policy agenda. No longer confined to preserving national parks or eliminating the most noxious forms of smog and the most obvious kinds of water pollution, the environmental agenda has expanded to embrace the preservation of open spaces, critical habitats, wetlands, tropical rain forests, and other natural areas; the reduction of all forms of harmful pollution and emissions; and the reformation of personal habits of consumption and corporate practices of production that underlie the supply and demand of products that directly or indirectly harm the environment. Environmental implications are everywhere and they have seeped into everyone's consciousness.

The first Earth Day, April 22, 1970, is a convenient marker for the launch of the Environmental Era, in which this pro-environment attitude gained a political critical mass, producing an impressive set of

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1. *See infra* Part III.

2. One of the best exegeses of the social, cultural, and economic changes that have contributed to modern environmentalism is found in SAMUEL HAYS, BEAUTY, HEALTH AND PERMANENCE: ENVIRONMENTAL POLITICS IN THE UNITED STATES (1987).

legislative and policy responses.[3] In a frenzied half-decade after Earth Day, Congress enacted almost all of the major pillars of modern federal environmental policy — the National Environmental Policy Act of 1969,[4] the Clean Air Act Amendments of 1970,[5] the Federal Water Pollution Control Act Amendments of 1972,[6] the Federal Environmental Pesticide Control Act of 1972,[7] the Marine Protection, Research, and Sanctuaries Act of 1972,[8] the Coastal Zone Management Act of 1972,[9] the Endangered Species Act of 1973,[10] the Safe Drinking Water Act of 1974,[11] the Federal Land Policy and Management Act of 1976,[12] the Resource Conservation and Recovery Act of 1976,[13] and the Toxic Substances and Control Act of 1976.[14] A number of other statutes could be added to this list.[15] Together, they constitute the foundation of an elaborate regulatory system that has undergone a number of refinements and midcourse corrections, a few significant

3. It is quite accurate to observe that environmentalism had already gained considerable momentum in the 1960s, without which Earth Day would have not been the notable event that it was. For different accounts of the origins of the early environmental legislation, see, e.g., E. Donald Elliott et al., *Toward a Theory of Statutory Evolution: The Federalization of Environmental Law,* 1 J.L. ECON. & ORG. 313 (1985); Daniel A. Farber, *Politics and Procedure in Environmental Law,* 8 J.L. ECON. & ORG. 59 (1992); Christopher H. Schroeder, *Rational Choice Versus Republican Moment Explanations for Environmental Laws, 1969-73,* 9 DUKE ENVTL. L. & POL'Y F. 29 (1998). An excellent summary of the policy agenda that confronted Congress in the early 1970s can be found in MARY GRAHAM, THE MORNING AFTER EARTH DAY: PRACTICAL ENVIRONMENTAL POLITICS (1999).

4. Pub. L. No. 91-190, 83 Stat. 852 (codified as amended at 1 U.S.C. §§ 4321-4361 (1994)).

5. Pub. L. No. 91-604, 84 Stat. 1676 (codified as amended at 42 U.S.C. §§ 7401-7671g (1994)).

6. Pub. L. No. 92-500, 86 Stat. 816 (codified as amended at 42 U.S.C. §§ 1251-1387 (1994)).

7. Pub. L. No. 92-516, 86 Stat. 975 (codified as amended at 1 U.S.C. §§ 136a-136y (1994)).

8. Pub. L. No. 92-532, 86 Stat. 1052 (codified as amended at 33 U.S.C. §§ 1401-1445 (1994)).

9. Pub. L. No. 92-583, 86 Stat. 1280 (codified as amended at 16 U.S.C. §§ 1451-1464 (1994)).

10. Pub. L. No. 93-205, 81 Stat. 884 (codified as amended at 16 U.S.C. §§ 1531-1544 (1994)).

11. Pub. L. No. 93-523, 88 Stat. 1660 (codified as amended at 42 U.S.C. §§ 300f – 300j-26 (1994 & Supp. II 1996)).

12. Pub. L. No. 94-579, 90 Stat. 2743 (codified as amended at 43 U.S.C. §§ 1701-1784 (1994)).

13. Pub. L. No. 94-580, 90 Stat. 2795 (codified as amended at 42 U.S.C. §§ 6901-6992k (1994)).

14. Pub. L. No. 94-469, 90 Stat. 2003 (codified as amended at 15 U.S.C. §§ 2601-2671 (1994)).

15. Zyg Plater identifies 34 important environmental statutes enacted in the three years after the National Environmental Policy Act. *See* ZYGMUNT PLATER ET AL., NATURE, LAW & SOCIETY TEACHER'S MANUAL app. (1992) (historical statutory appendix).

additions, such as the Superfund legislation,[16] increased commitments to cooperating in improving international environmental problems, and accretions of additional complexity, but very little significant retrenchment.

When the Republican Party assumed control of Congress in 1994 for the first time in forty years, Republican leaders in the House thought they had caught the crest of a wave of citizen discontent toward every manifestation of big government, including the extensive federal regulation of the environment. Trying to cash in on that momentum, they made rollback of environmental regulation one of their prime objectives.[17] Although the House succeeded in enacting a majority of the other elements of the Republicans' Contract with America, its leaders were quite chastened by the backlash of voters toward their environmental deregulatory agenda. The 104th Congress closed its books with very little to show for the House leadership's deregulatory efforts.[18] While the Republicans have not abandoned their ambitions to rein in environmental regulations, they have "shrunk back from trying to restructure the system."[19] As Republican Senator John McCain put it, by showing themselves "too eager to swing the meat ax of repeal when the scalpel of reform is what's needed," the Republican leadership had succeeded in making their stewardship of the environment "the voters' number-one concern about continued Republican leadership of Congress."[20] After narrowly retaining the House majority in the 1996 elections, this leadership turned in the meat ax, and is now trying the scalpel approach, seeking more meas-

16. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Pub. L. No. 96-510, 94 Stat. 2767 (codified as amended in scattered sections of 33 U.S.C. and 42 U.S.C.).

17. *See* Robert L. Glickman & Stephen B. Chapman, *Regulatory Reform and (Breach of) the Contract with America: Improving Environmental Policy or Destroying Environmental Protection?*, 5 KAN. J.L. & PUB. POL'Y, Winter 1996, at 9.

18. This recent experience mimics a similar sequence of events that took place when President Reagan came into office in 1981. At that time, "[a]pprehension over inadequate environmental protection by government, along with increased societal attention to environmental problems such as toxic wastes and ozone depletion, led to a significant resurgence of public support for environmental protection in the 1980s." Robert Emmet Jones & Riley E. Dunlap, *The Social Bases of Environmental Concern: Have They Changed over Time?*, 57 RURAL SOC. 28, 30 (1992). Similar resurgence occurred in 1994 and 1995, because in both cases, the deregulators overestimated the popularity of their program with the voters. The net result in both cases was negligible overt progress in rolling back environmental legislation, although in each case implementation of existing statutes was delayed, underfunded, or redirected, at least for a time. For a summary of appropriations riders that reduce funding for environmental enforcement, or constrain implementation of environmental legislation in other ways, see Natural Resources Defense Counsel, *Backdoor Legislating* (visited Jan. 10, 2000) <http://www.nrdc.org/nrdcpro/fpprog.htm>.

19. Allen Freedman, *GOP's Secret Weapon Against Regulations: Finesse,* CONG. Q. WKLY. REP. 2314 (Sept. 5, 1998) (quoting House Republican David McIntosh).

20. John McCain, *Nature Is Not a Liberal Plot,* N.Y. TIMES, Nov. 22, 1996, at A31.

ured and selective efforts to reduce the burden of complying with environmental laws — estimated to equal about $143 billion in 1999.[21] In the words of one Republican congressional leader, "If you have reasonable goals and you sit down with reasonable people in the administration, then maybe you can accomplish something."[22]

These recent events confirm that environmentalism has had a staying power on the public agenda that is surprising to political observers who have seen other policy issues rise and then fade. On the twentieth Earth Day, David Broder, columnist for the *Washington Post*, captured a prevailing interpretation of this persistent environmental concern when he wrote that:

> [a]t one level, the environmentalists have swept away all opposition. The 'conservation ethic' has become one of the fixed guiding stars of American politics — a 'value question' that permits only one answer from anyone who hopes to be part of the public dialogue.... [T]he argument is no longer about values. That's over, and the environmentalists have won. The argument is now about policies. And those with the best evidence and the best arguments, not just the purest hearts, will prevail.[23]

Environmental protection has thus become a "valence issue[ ]" — like improving the economy or reducing crime — "where virtually everyone supports the goal, thus confining potential disagreement to the means by which these ends can be achieved."[24]

Of course, disputes ostensibly about means can be just as contentious and long-standing as disputes explicitly addressed to ends. Notwithstanding their valence status — or perhaps because of it — environmentalism and environmental issues remain major sources of policy disagreement due to the fact that after thirty years of grappling with environmental issues, environmental questions press us more than ever, with some of them, such as global warming, posing challenges to our governance institutions that never have been faced before.

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21. ENVIRONMENTAL PROTECTION AGENCY, ENVIRONMENTAL INVESTMENTS: THE COST OF A CLEAN ENVIRONMENT 8-51 tbl. 8-12a (1991); Paul R. Portney, *Environmental Policy in the Next Century, in* SETTING NATIONAL PRIORITIES: THE 2000 ELECTIONS AND BEYOND 359, 367 n.14 (Henry J. Aaron & Robert D. Reischauer eds., 1999) ("The producer price index for capital equipment was used to convert 1986 dollars to current dollars.").

22. *See* Freedman, *supra* note 19, at 2316.

23. David Broder, *Beyond Folk Songs and Flowers,* WASH. POST., Apr. 22, 1990, at B7.

24. JOHN R. HIBBING & ELIZABETH THEISS-MORSE, CONGRESS AS PUBLIC ENEMY 55 (1995).

II.

In *Eco-pragmatism*, Daniel Farber[25] attempts to sketch a consensus approach to environmental policy built upon the claim that we have moved beyond the "value question." The book takes our "profound national commitment to environmental protection" (p. 1) as a "given" (p. 3). It suggests that the next stage in developing our environmental problem-solving capabilities requires determining "how best to use whatever tools are available to make intelligent judgments in hard cases" (pp. 70-71). Hard cases are those that pose the vexing question of what "priority [we ought to give our environmental] values" (p. 3), when those values clash with others that we also think important, such as the value of maintaining and improving economic well-being. *Eco-pragmatism* argues that we can discover a basic framework for addressing those hard cases by examining the content of the commitment our society already has made to the environment.

Eco-pragmatism rewards the reader in many different ways. For instance, environmentalism's forward-looking, preventative focus often entails actions that have significant benefits and costs spread across long time spans, under conditions of substantial uncertainty about their actual effects. Any framework for environmental decisionmaking must cope with the problems posed by such long time frames and uncertainty. The book contains valuable discussions of these problems offering important insights into dealing with them.[26] Professor Farber also draws on his extensive study of the landmark *Reserve Mining*[27] litigation, interleaving more analytical discussions of issues with close attention to the facts of that dispute and its aftermath to illustrate various points in his argument. Anyone who has taught or studied *Reserve Mining* will value the book as an extended commentary on the case.

The central claim of the book is that our already-in-place national commitment to environmental values implies that we should approach all environmental decisions using a framework that Professor Farber dubs "eco-pragmatism." The book's main pre-occupation, and this Review's main focus, is Professor Farber's defense of this claim.

Eco-pragmatism starts from a "pro-environmental baseline" (pp. 93-132), from which analysis of environmental problems always begins "with a presumption in favor of protecting the environment except where infeasible or [where costs are] grossly disproportionate to the benefits" (p. 94). These exceptions are necessary because it would be

25. Henry J. Fletcher Professor of Law, University of Minnesota.

26. In addition to passing discussion throughout the book of these and other basic issues in environmental policymaking, Professor Farber devotes individual chapters of the book to these two particularly central questions. *See* pp. 133-98.

27. Reserve Mining Co. v. EPA, 514 F.2d 492 (8th Cir. 1975) (en banc).

"absurd" to embrace a policy that completely ignores the burdens of compliance costs (p. 3). Concern about such compliance costs can sometimes elide two kinds of hard cases, which Professor Farber distinguishes. First, we can face serious hazards where the costs of reducing those hazards further is disturbingly high. Second, we can face hazards where the probability of harm is extremely low, or where the harm is not severe (or some combination of these), such that most people would evaluate the risk as insignificant. The disproportionate costs proviso addresses the first set of cases. The insignificant risk proviso addresses the second set. In toto, then, Professor Farber argues for a "hybrid approach" to environmental problem solving, according to the principle that "[t]o the extent feasible without incurring costs grossly disproportionate to any benefit, the government should eliminate significant environmental risks" (p. 131).

In theory, the insignificance proviso should be less controversial than the one addressing gross disproportionality. Only the hardiest zealot wants society to expend scarce resources eliminating insignificant risks. If we ever reach the point where our most serious policy disputes arise over the desirability of pursuing insignificant risks, we will either have lost our moorings entirely, or arrived there only because all significant risk issues have been satisfactorily resolved.[28] In contrast, instances of the disproportionality problem arise with some frequency. Environmental problems often exhibit the "90-10" phenomenon, a shorthand label for the realization that reducing the last increments of an environmental risk (for example, the last 10%) incurs the vast preponderance of the costs (for example, 90% of the total).[29] Sometimes this very-costly-to-remove residuum will pose an insignificant residual risk, thereby morphing into the more tractable problem. Other times, however, the risk will remain significant, but removing it will still be very costly. Ought we to stop short of reducing the risk to the point of insignificance? Under Professor Farber's eco-pragmatic

28. This is not to say that the insignificant risk proviso is without its controversies. People disagree enormously over what constitutes a significant risk. Sensitive to the implications of declaring a risk to be insignificant, federal agencies and elected officials have always shied away from giving the term a cogently articulated definition. Typical of the official tiptoeing around the issue, when the EPA undertook a rulemaking to define a cognate term, "acceptable risk," under the original version of § 112 of the Clean Air Act, 42 U.S.C. § 7412 (1976) (superseded), it ultimately shied away from any transparently objective definition, choosing instead to identify factors and ranges of values that would establish presumptions or be relevant to the overall conclusion. *See* National Emissions Standards for Hazardous Air Pollutants, 40 C.F.R. pt. 61 (1999); Benzene Emissions from Maleic Anhydride Plants, Ethylbenzene/Styrene Plants, Benzene Storage Vessels, Benzene Equipment Leaks, and Coke By-Product Recovery Plants, 54 Fed. Reg. 38,044 (1989); *see also* ROBERT PERCIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE AND POLICY 497-507 (3d ed. 2000) (summarizing the rulemaking).

29. *E.g.*, STEPHEN BREYER, BREAKING THE VICIOUS CIRCLE 11-12 (1993) (discussing the "90-10" phenomenon, which he refers to as the "problem of 'the last 10 percent' ").

framework, we should when the abatement costs are "grossly disproportionate" to the benefits achieved.

Professor Farber's hybrid framework approaches environmental problems from a different perspective than does conventional cost-benefit analysis. CBA typically determines the value of the benefits and the costs of a regulatory action by calculating what the persons affected by the decision would be willing to pay to avoid the adverse effects or to receive the benefits of the action.[30] Much of *Eco-pragmatism* concerns itself with explaining why the hybrid framework is superior to CBA-based frameworks.

Professor Farber is a practicing pragmatist generally, as well as in his environmental scholarship,[31] thus we ought to expect not only that he would advance a proposal to proceed with environmental quality measures pragmatically, but also that he would defend the proposal with pragmatist arguments. On this score, *Eco-pragmatism* does not disappoint. By approaching his topic pragmatically, Professor Farber deftly steps around a number of knotty debates in the literature, such as whether private or public values ought to guide our policies, or which set of philosophical premises best grounds environmentalism. The reservations expressed in this Review come from one interested in pursuing pragmatic considerations even further than *Eco-pragmatism* does.

Eco-pragmatism asserts that the hybrid framework commends itself to us because it is already rooted in our practice, so that it functions largely to "make explicit the predominant values underlying much of our current regulatory system" (p. 11). Initially, this seems a rather nonpragmatic claim, insofar as pragmatism is associated with a forward-looking instrumentalist analysis. Pragmatists, though, do not ignore past practices. Pragmatism involves a form of "inquiry that is at the same time contextualist and instrumentalist," which understands human thought to be constituted "out of a background of *practices* . . . as well as being *practical*, in the sense of purposively directed to action."[32] Because practices can reflect settled expectations and strongly held beliefs,[33] dislodging those expectations and beliefs will incur dis-

30. As an alternative to willingness to pay, CBA can use valuations based on willingness to accept. *See* discussion *infra* notes 50 to 52 and accompanying text.

31. *See, e.g.*, Daniel A. Farber, *The Inevitability of Practical Reason: Statutes, Formalism and the Rule of Law*, 45 VAND. L. REV. 533 (1992); Daniel A. Farber, *Reinventing Brandeis: Legal Pragmatism for the Twenty-First Century*, 1995 U. ILL. L. REV. 163; Daniel Farber, *Shocking the Conscience: Pragmatism, Moral Reasoning, and the Judiciary*, 16 CONST. COMMENTARY 675 (1999) (reviewing RICHARD A. POSNER, THE PROBLEMATICS OF MORAL AND LEGAL THEORY (1999)).

32. Thomas C. Grey, *Freestanding Legal Pragmatism*, *in* THE REVIVAL OF PRAGMATISM 254, 255 (Morris Dickstein ed., 1998).

33. Practices can also be repositories of knowledge. *See, e.g.*, Richard A. Posner, *Pragmatic Adjudication*, *in* Dickstein, THE REVIVAL OF PRAGMATISM, *supra* note 32, at 235, 238:

location and uncertainty costs that pragmatists must take into account. Thus decisions, which might otherwise be justified if embedded in another society or another time, may not be justified in our own here and now, given our social, cultural, and legal context.

Our existing environmental practices certainly do include many examples of regulatory standards set on the basis of technological and economic feasibility. Along with health- or environment-based standards and some cost-benefit balancing standards, these feasibility-based standards make up the bedrock bases for pollution control within environmental policy.[34] Many of the acronyms to which environmental law seems so attracted, such as BAT, MACT, and LAER,[35] represent different forms of feasibility-based standard setting, although none of them explicitly captures all three of Professor Farber's critical elements (*feasibility* checked by *grossly disproportionate costs* and *insignificant risks*). Feasibility analysis is not a purely domestic product, either. Across the pond, the British often approach environmental standard setting with a BATNEEC requirement — "best available technology not entailing excessive cost"[36] — which approximates the hybrid framework. All in all, approaches to regulation that instruct industry to do all that is practicable or feasible — but only up to a point — are a firm part of our existing environmental practice.

Of the three major approaches to risk regulation, technology-based analysis can also lay a solid claim to superiority on several different grounds. Since the early days of the Environmental Era, experience has shown that by using technology-based controls, environmental, health, and safety agencies have been able to complete a higher number of regulations, have those regulations survive judicial challenges, and subsequently have them implemented more expeditiously by the regulated community compared to the other two types of regulation.[37] As some evidence of this, on several occasions when

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[Past decisions] are repositories of knowledge . . . and so it would be folly to ignore them even if they had no authoritative significance. . . . [A] decision that destabilized the law by departing too abruptly from precedent might, on balance, [also] have bad results. . . . The pragmatist judge thus regards precedents, statutes and constitutions both as sources of potentially valuable information . . . and as signposts that he must be careful not to obliterate or obscure gratuitously, because people may be relying upon them.

34. *See* PERCIVAL ET AL., *supra* note 28, at 150-53 (explaining how standards are set under each basis of pollution control).

35. BAT stands for best available technology. *See* Protection of Environment, 40 C.F.R. § 141.2 (1999); *see also* C.C. LEE, DICTIONARY OF ENVIRONMENTAL LEGAL TERMS 67 (1997). MACT is maximum available control technology. *See* 40 C.F.R. § 63.51; *see also* LEE, at 390. LAER is lowest achievable emissions rate. *See* 42 U.S.C. § 7501 (1994); *see also* LEE, at 372.

36. On BATNEEC, see JAMES CONNELLY & GRAHAM SMITH, POLITICS AND THE ENVIRONMENT 160-62 (1999).

37. *See, e.g.*, FRANK B. CROSS, ENVIRONMENTALLY INDUCED CANCER AND THE LAW 97-133 (1989) (summarizing experience under numerous statutes regulating carcinogens); Howard Latin, *Ideal Versus Real Regulatory Efficiency: Implementation of Uniform Stan-*

Congress has been faced with a sorry record of accomplishment under an existing health-based regime, it has amended the relevant statute and switched to a feasibility framework, which then has resulted in more environmental progress being made.[38]

In a democracy, practices that capture public sentiments are very difficult to dislodge. As Abraham Lincoln noted, "public sentiment is everything. With public sentiment, nothing can fail. Without it, nothing can succeed."[39] Ultimately, the argument to which Professor Farber attaches the most significance in defense of the hybrid approach rests on its faithfulness to the public sentiment. Better than any other, this approach "best . . . captur[es] our society's fullest understanding of the values at stake" in environmental decisionmaking (p. 92), whereas approaches involving cost-benefit analysis, even when those approaches adopt an environmental baseline and are "humanely" applied, "would not do justice to our community's values and would to some degree trivialize our national commitment to the environment" (p. 122).

I do not believe that this argument can be successfully defended when it is made with reference to environmental issues generally. Although it is almost self-evident that in the past thirty years we have placed environmental concerns firmly on the public agenda as something the public cares about and is willing to devote resources to address, the more detailed structure of our commitments — how far we are willing to go in advancing those interests and what trade-offs we are prepared to make — remains very much a work-in-progress for the coming years. Having said this, there is one subcategory of environmental concern in which the case for a pro-environmental baseline stands on firmer ground: when significant risks to human health are at stake, risk reduction up to the point of feasibility does seem to be the presumptive approach. Part III takes up these points in more detail.

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dards and "Fine-Tuning," Regulatory Reforms, 37 STAN. L. REV. 1267 (1985) (canvassing the major pollution control statutes); Thomas O. McGarity, *Media-Quality, Technology, and Cost-Benefit Balancing Strategies for Health and Environmental Regulation*, LAW & CONTEMP. PROBS., Summer 1983, at 159 (same).

38. Among the significant standards that have been modified to adopt a feasibility framework are the toxic effluent controls under the Clean Water Act and the hazardous air pollutant standards under the Clean Air Act. *See* PERCIVAL ET AL., *supra* note 28, at 869, 918-20 (describing changes in the 1977 Water Act amendments adopting feasibility approach for toxic water effluents, and changes in 1990 Air Act amendments adopting feasibility approach for hazardous air pollutants). In 1996, Congress adopted changes in the Safe Drinking Water Act that closely approximate *Eco-pragmatism*'s hybrid approach. The SDWA now requires the EPA to set drinking water contaminant levels as close to a health-based goal as is feasible, but it can stop short of that point if it finds that the benefits achieved by such a standard would not "justify the costs" necessary to achieve it. *See id.* at 479-84 (describing statutory changes).

39. William L. Rivers, *Appraising Press Coverage of Politics*, *in* POLITICS AND THE PRESS 35, 53 (Richard W. Lee ed., 1970) (internal quotation marks omitted).

Before examining the details of our environmental practices and commitments, however, the remainder of this Part assesses the practical arguments the book makes for the hybrid framework. Traditional practices backed by strong public sentiment may enjoy the benefit of the doubt, so that someone wishing to alter significant practices bears the burden of proof; but if consequentialist arguments clearly counsel reform, the pragmatist will be inclined to reject those practices and will seek the best means of accomplishing that reform. In the case of the hybrid framework, though, practical considerations, in Professor Farber's view, support rather than undermine the hybrid framework, thus demonstrating "that the current regulatory system is more coherent than it sometimes appears" (p. 11).

The practical arguments for the hybrid framework are not the most compelling of the book. Ideally, evaluating any environmental standard would include evaluating the impact that the standard, as implemented, had or would have on the environment, the economy, and other relevant factors, and then comparing the results to that standard's alternatives. *Eco-pragmatism*, however, does not give a clear picture of what the overall economic and environmental consequences of the hybrid approach would be, were it applied faithfully across the entire environmental agenda. In fairness, such evaluations are difficult. Reliable baseline environmental data is sketchy at best; monitoring systems to track changes in environmental indicators are sparse. Even were such data available, changes in environmental indicators can only answer the before and after question — what was the state of the environment before the regulations were imposed and what it is after — when the relevant question is the with and without question — what is the state of the environment with the regulations in place and what would it have been without them. The answers will differ because environmental degradation is influenced by factors in addition to federal regulation, such as changing norms, and the economy, as well as state, local, and private actions that might have been taken had not the federal regulation intervened. Still, the inability to trace the hybrid framework's effects on the status of the environment inevitably leaves an instrumentalist evaluation of that framework stuck with second-best measures.

Instead, Professor Farber concentrates on comparing the hybrid framework to cost-benefit analysis (CBA). The amount of attention CBA receives throughout the book, as well as the fact that Professor Farber adds the insignificant risk and disproportionate cost provisos to blunt the force of CBA-based objections to his proposal, confirms that he considers CBA to be the main challenger to his approach.

From the perspective of CBA, the environmental problem is a problem of achieving the correct balance between the environment's use as a resource in support of preferences that would consume it and its use as a resource in support of preferences that would preserve it.

The "economic problem in all cases of harmful effects is how to maximize the value of production."[40] Whereas CBA's critics scorn it for reducing life, limb, and the environment to production inputs, CBA advocates criticize the feasibility approach because decisions under it do not even attempt to strike a balance between benefits and costs so as to achieve some overall socially desirable result.[41] Imposing controls on industry to the limits of feasibility can result in "treatment for treatment's sake," as when paper pulp plants are required to install technology controls to prevent the discharge of effluent into the Pacific Ocean, where it is causing no discernible damage.[42] Even where some damage or risk is discernible, a feasibility standard may push controls to such a point that the costs of removing the last increment of pollution far exceed the economic benefits from doing so. In either case, the result is a loss of social resources that might be put to alternative uses, and hence a failure to maximize the value of production.

Professor Farber finds considerable merit in these criticisms, and the disproportionate costs and insignificant risks provisos serve to prevent the hybrid framework from insisting that we implement environmentally protective measures simply because we are technologically and economically capable of doing so. By disarming some of the most severe CBA-based criticisms in this way, *Eco-pragmatism* brings the results of the hybrid approach into some proximity with what CBA itself might dictate in a good number of cases. Indeed, Professor Farber regularly downplays the decisional differences between the hybrid approach and environmentally sensitive CBA. "In large part," he says, "[the dispute between advocates of CBA and feasibility analysis assumes] that the distinction is outcome determinative" (p. 91), when it is not. "The results of a cost-benefit analysis by an environmentally sensitive agency may not necessarily differ very much from the results of a sensible feasibility analysis."[43]

The concessions to CBA generate an obvious question: Why not simply adopt CBA as the basic approach and then modify *it* as necessary? Although he advances some practical reasons for preferring the hybrid framework over CBA, the root problem seems to be that CBA

40. Ronald Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1, 15 (1960).

41. Adler and Posner, for example, term feasibility approaches "nonaggregative," in so far as those approaches do "not seek to determine (or to approximate) the aggregate effect of the project with respect to one or more . . . constituents of well-being, or prerequisites for well-being, or proxies for these." Matthew D. Adler & Eric A. Posner, *Rethinking Cost-Benefit Analysis*, 109 YALE L.J. 165, 229 (1999).

42. *See* Weyerhaeuser Co. v. Costle, 590 F.2d 1011 (D.C. Cir. 1978).

43. P. 115; *see also* p. 82 ("[While] [o]n its surface . . . feasibility analysis looks very different from a cost-benefit analysis. . . . the difference may not be quite as complete as it appears."); p. 113 ("Sunstein-style balancing and an environmental baseline might often lead to the same results . . . .").

adopts a "neutral" stance toward environmental values, a neutrality that is inconsistent with our national environmental commitment.[44]

This is an odd objection to lodge against CBA, however, as it seems as capable of being tilted toward environmental protection as does the hybrid approach. First, a pure CBA could be supplemented with a pro-environmental proviso, much as Professor Farber supplements a pure feasibility approach with his two provisos. Even proponents of CBA, as well as others who generally advocate greater quantification of risks and attention to trade-offs between benefits and costs, frequently insist that value-free or neutral CBA should not be the final determinant of environmental, health, and safety decisions. They acknowledge that the results of a CBA can be supplemented to take considerations other than individual willingness to pay. When questioned during his Supreme Court confirmation hearings about his view that society regularly mishandles the 90-10 problem, for example, then-Judge Stephen Breyer told Senator Joseph Biden that the decision as to how much money to spend to save life is

> the kind of decision — my goodness, it is health. It is safety. There is no economics that tells you the right result in that kind of area. There is no economics that tells . . . us how much we are prepared to spend . . . on the life of another person. . . . [T]hat is . . . a decision that people will make through their elected representatives . . . .[45]

Herman Leonard and Richard Zeckhauser, strong advocates of cost-benefit and risk-benefit analysis, likewise embrace a moderated approach to CBA.[46] They concede that

> every important social value [cannot] be represented effectively within the confines of cost-benefit analysis. Some social values will never fit in a cost-benefit framework and will have to be treated as "additional considerations" in coming to a final decision. Some, such as the nonsacrifice of human life, may be binding constraints. . . . We fully accept the role of "untouchable" values as overriding considerations in public decision-making. They do not invalidate cost-benefit analyses; they merely illustrate that more is at stake than just costs and benefits.[47]

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44. *See* pp. 94-114 (discussing the neutrality assumption); p. 94 (arguing that the feasibility approach incorporates "the environmental norms that our society has unmistakably embraced.").

45. *Nomination of Stephen G. Breyer to be an Associate Justice of the Supreme Court of the United States; Hearings Before the Senate Judiciary Comm.*, 103d Cong. 276-77 (1994).

46. I think it is fair to characterize Professors Leonard and Zeckhauser as two staunch advocates for increased use of cost-benefit analysis in risk-related policymaking. *See, e.g.*, Herman B. Leonard & Richard J. Zeckhauser, *Cost-Benefit Analysis Applied to Risks: Its Philosophy and Legitimacy, in* VALUES AT RISK 31, 46 (Douglas McLean ed., 1986) ("We have argued that our normal market and legal system tends to break down when substantial health risks are imposed on a relatively large population. These are therefore precisely the situations in which the cost-benefit approach is and should be called into play.").

47. *Id.* at 42.

Professor Sunstein's recent proposals for a modified form of cost-benefit analysis, which Professor Farber describes at some length, also exhibits a similar willingness to supplement private value-based CBA with publicly determined considerations.[48]

These statements are typical. Professor Farber himself concedes that it is probably impossible to find a "pure bean counter," someone who insists that pricing all costs and benefits of an environmental question according to willingness to pay and then comparing the totals should provide the sole and exclusive information upon which to base environmental policy.[49]

Rather than supplementing a neutral CBA with some pro-environmental proviso, a bias toward environmental values can be integrated into the CBA itself.[50] Before CBA can even be applied, the analyst must first decide whether to price various factors according to what a person is willing to pay (WTP) to acquire them or avoid having them imposed on him, or according to what a person is willing to accept (WTA) to have a benefit taken away or a cost imposed.[51] With full technical legitimacy, the analyst could ascertain what the beneficiaries of regulation were willing to accept to forgo the environmental benefits of the regulation, and then could compare that value to the willingness to pay of those who would be burdened by the regulation. Using the beneficiaries' WTAs and the polluters' WTP in this way effectively assigns the initial right to be free of environmental harm to its victims, thereby tilting the analysis in favor of the environment, both as a theoretical and as a practical matter. This approach also allows individuals to express their environmental commitment by demanding a high price to relinquish that right, higher than being forced to pay to avoid losing it.[52]

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48. *See* pp. 94-114. "In one formulation [of Sunstein's proposal], officials would engage in a two-stage decision process. The first stage would consist of a quantitative cost-benefit analysis; the second would introduce other values, 'if any are relevant,' that cost-benefit analysis leaves out." P. 95.

49. Throughout the book, Professor Farber uses two extreme views, "tree hugging" and "bean counting," as foils for his hybrid approach, but he admits that "it would be hard to find anyone who takes these extreme positions," p. 36, and that "[i]n reality, most people's feelings are a confused mixture of tree hugger and bean counter." P. 72.

50. *E.g.*, p. 101 ("Cost-benefit analysis purportedly gives equal weight to the interests of both sides and is therefore unreceptive to the use of moral rights as an analytic tool.").

51. Whether to use WTA or WTP in CBA cannot be resolved by CBA. This indeterminacy, and the need to resolve it before a CBA can proceed, is known as the offer/asking problem. *See, e.g.*, Duncan Kennedy, *Cost-Benefit Analysis of Entitlement Problems: A Critique*, 33 STAN. L. REV. 387, 401-21 (1981).

52. Two effects can produce a WTA higher than a WTP. First, if the right to be free from environmental harm is highly valued, assigning it to an individual makes her wealthier than if she did not possess the right. If money has diminishing marginal utility, the sum needed to provide utility equal to this right will be greater for her than the sum she would offer to purchase it. *See* RONALD COASE, THE FIRM, THE MARKET AND THE LAW 170-174 (1988) (discussing the wealth effect). Second, experiments show that individuals are averse

The impact of the choice between the prices from WTA and WTP for environmental benefits can be illustrated using one of Professor Farber's examples. Professor Farber argues that a high value ought to be placed on human life in deciding whether costs are grossly disproportionate to benefits, but not so high as to be "extravagant" (p. 87). "For example," he says, "a figure of $50 million would imply that people would be willing to spend $50,000 apiece to escape a one-in-a-thousand risk of death, which seems implausible" (p. 87). In so saying, he frames the issue of price in terms of WTP. If the issue is instead framed in terms of WTA, however, it seems entirely possible and hardly extravagant that someone would demand to be paid $50,000 before agreeing to have a one-in-a-thousand risk placed on her. A CBA that employs WTP for costs and WTA for environmental benefits might well find a $50 million figure to be plausible, and this would alter regulatory outcomes significantly. Thus, by selecting WTP and WTA properly, CBA need not adopt a "neutral, detached stance" to the question of environmental protection.

Professor Farber is thoroughly aware that the choice between WTP and WTA is consequential. Yet the only reason he advances for deciding that CBA must be neutral toward environmental values, and cannot adopt WTA as a way of biasing its results toward those values, is that "[a]s a practical matter, economists [perform] contingent valuations [the technique for eliciting WTA responses] strongly prefer not to use WTA because they often get very high or infinite prices or outright refusals to sell" (p. 100). Curiously, it seems that the fact that WTA does indeed reflect individuals' placing high values on the environment, which is just what Professor Farber argues our regulatory system ought to do, here counts as a reason *not* to use it. If economists believe that contingent valuation results are inaccurate indications of true WTA, say because of poor question design, the response to that problem could be investing more resources in improving these survey techniques, rather than jettisoning the approach entirely.

In addition to the claimed advantage of his hybrid approach with respect to neutrality, Professor Farber asserts several practical advantages for the hybrid framework over CBA in dealing with the complexities in public decisionmaking. These claims also do not seem unassailable. "Feasibility analysis," he says, "stresses nuances (such as voluntariness, strangeness of risks and concentration of costs on par-

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to losses more than they value gains, and hence, they hold onto an asset more vigorously than they try to acquire that asset. This "endowment effect" operates in circumstances in which the influence of the wealth effect is minimal. *See, e.g.*, Christine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1484 (1998) (discussing small-value experiments in behavioral economics where the endowment effect is pronounced); Cass Sunstein, *Endogenous Preferences, Environmental Law*, 22 J. LEGAL STUD. 217, 224 n.17 (1993) (describing the differences between the wealth effect and the endowment effect).

ticular firms), as opposed to overall cost and mortality reduction" (pp. 72-73). Responding to such "nuances" does seem desirable, because we now have substantial literature attesting to the fact that the public's reaction to risky situations takes into account many more features than simply the magnitude of the harm and the probability of its occurrence, which is the classic CBA understanding of risk. The public is less accepting of involuntary risk compared to voluntary risk, of inequitably distributed risk compared to equitably distributed risk, of risk from dread causes, such as cancer, compared to risk from causes such as automobile accidents, and so on.[53]

If such qualitative elements of risk ought to play a role in our regulatory strategy, CBA could be modified to incorporate them as well. In principle, a more complex CBA could take these additional dimensions of risk aversion into account. The public's greater aversion to involuntary risk, for instance, can be accommodated by adjusting upward the value of life estimates obtained from labor-market-based studies, in which workers accept a bundle of job-plus-risk at rates that translate into an implicit value of $3 to $7 million per fatality. Other aspects of public dread of risk, such as the strangeness of the risk, could be accommodated in similar ways.[54] The particular costs associated with plant closings and bankruptcies can be brought into CBA by shifting the object of analysis of the CBA downward from entire industry categories to specific firms within those industries.[55]

Pervasive uncertainty about the actual benefits and costs of environmental degradation or its reduction supposedly gives another advantage to feasibility analysis over CBA. Because CBA is more "quantitative and formalized" (p. 168), Professor Farber says it places greater informational demands on us, demands we cannot ultimately meet, than does feasibility analysis.[56] Informational demands, how-

53. *See, e.g.*, PETER SANDMAN, A FORMULA FOR EFFECTIVE RISK COMMUNICATION (1991) (summarizing qualitative elements of people's understanding of risk, and collecting references); Timur Kuran & Cass R. Sunstein, *Availability Heuristics and Risk Regulation*, 51 STAN. L. REV. 683, 709 & tbl.1 (1999) (same).

54. For two sets of approaches to adjustments such as these, see Clayton P. Gillette & James E. Krier, *Risks, Courts, and Agencies*, 138 U. PA. L. REV. 1027, 1071-79 (1990) and Richard Revesz, *Environmental Regulation, Cost-Benefit Analysis, and the Discounting of Human Lives*, 99 COLUM. L. REV. 941 (1999). One need not endorse any specific proposals to accept the possibility that such adjustments can be made.

55. What is cost-beneficial for the industry as a whole may not be so at the firm level once the adverse health costs, stress on family and anxiety of unemployment, loss of collateral jobs in the community, and other firm-specific cost elements are balanced against local benefits.

56. The "softness of our information base reinforces the argument . . . for placing heavier reliance on feasibility analysis than on cost-benefit analysis. Cost-benefit analysis, because it is more quantitative and formalized, puts higher information demands on the analyst." P. 168. Under feasibility analysis, "[w]e have to know . . . only that the risks are significant," whereas CBA requires us to know "just how high they are." P. 168. Under fea-

ever, vary more according to the level of aggregation at which decisionmaking takes place under either framework than they do between the hybrid framework and CBA conducted at the same level of aggregation. For instance, the national level cost-benefit analysis that convinced the EPA to eliminate lead from gasoline was no more fact intensive than the inquiries the EPA must undertake in order to issue a national BAT standard under the Clean Water Act.[57]

It is undeniably true that cases like *Corrosion Proof Fittings*[58] place significant informational demands on CBA and also make it difficult for CBA to take account of complex or nonquantified values. After the EPA promulgated a rule phasing out the use of asbestos in a variety of products, the Fifth Circuit reversed on several grounds. Despite an extremely thorough inquiry into the impact of the asbestos ban by the EPA, the court found the agency's CBA to be inadequate because of its failure to gather enough information. It also faulted the EPA for relying upon "nonquantified benefits" as partially determinative of its decision under the Toxic Substances Control Act, a risk-benefit balancing statute. The court ruled that "[u]nquantified benefits can . . . permissibly tip the balance in close cases. They cannot, however, be used to effect a wholesale shift on the balance beam."[59] The court's apparent view is that nonquantified benefits could perform a tie-breaking role when the outcome was otherwise close, but could not be considered for more than this.

Neither of these two types of quantification fetishism, though, is essential to CBA-based frameworks. By statute, Congress could authorize the incorporation of nonquantified benefits into statutory standard setting. One model for doing this is the approach taken by the Food Quality Protection Act of 1996.[60] It recognizes the special vulnerability of infants and children to risks of exposure to food additives and pesticides by instructing the EPA to assess these risks separately. If the EPA finds the data inadequate for a reliable assessment of risk, the EPA is authorized to require a tenfold more stringent margin of safety in permissible tolerances.[61] In another example, Congress

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sibility analysis we have to know "only that the costs are feasible," whereas CBA requires us to know "just what they will run." P. 168.

57. For a summary of the lead CBA, see PERCIVAL ET AL., *supra* note 28, at 36-40. For a description of BAT standard setting and fact gathering, see WESLEY MAGAT ET AL., RULES IN THE MAKING (1986).

58. 947 F.2d 1201 (5th Cir. 1991).

59. Corrosion Proof Fittings v. EPA, 947 F.2d at 1219. For criticisms of the result, see Thomas O. McGarity, *The Courts and the Ossification of Rulemaking: A Response to Professor Seidenfeld,* 75 TEXAS L. REV. 525, 541-49 (1997).

60. Food Quality Protection Act of 1996, Pub. L. No. 104-170, 110 Stat. 1489 (codified as amended in various sections of 7 U.S.C. and 21 U.S.C.).

61. *See* 21 U.S.C. § 346a(b)(2)(C) (Supp. II 1996).

has recently amended the Safe Drinking Water Act, specifically instructing the EPA to study both "quantifiable and nonquantifiable" benefits and costs to determine whether a feasibility-based drinking water contaminant level imposes costs that are not justified by its benefits, without any indication that nonquantified factors are to be used only as tie breakers.[62]

Under our system of judicial review of administrative action, the computational demands of precision and formalization are largely set by the standards of judicial review, and those standards can treat feasibility analysis as harshly as *Corrosion Proof Fittings* treats CBA. The Supreme Court's *Benzene*[63] decision had a similarly constricting effect on feasibility analysis. When the Court imposed a "significant risk" threshold on Occupational Safety and Health Administration ("OSHA") as a precondition to regulating benzene under the statute's feasibility approach, Justice Stevens went out of his way to write that this requirement was not intended to place OSHA in a "mathematical straitjacket." Nonetheless, it took OSHA ten years to reinstate a stringent feasibility-based standard for benzene exposure in the workplace.[64] Fearing reversal if it did otherwise, OSHA now employs risk assessment techniques in setting exposure levels for this and other toxics that are indistinguishable from those used by agencies operating under statutes that employ CBA frameworks.[65]

It still might be argued that feasibility analysis will always necessarily be less informationally demanding than CBA simply because only control technology costs are relevant to a pure feasibility approach, whereas under CBA both technology costs *and* environmental benefits must be monetized. Professor Farber does not advocate a pure feasibility approach, however, but rather a feasibility approach with the insignificant risk and disproportionate cost provisos. The former commits the hybrid framework to the same type of risk assessments that OSHA found so informationally demanding after *Benzene*, while the latter looks to CBA to provide a needed "reality check" (p. 114; internal quotations omitted) on pure feasibility approaches. So an agency using the hybrid framework will be required to calculate risks, costs, and benefits, just as it would were it using CBA, then to declare risks to be significant and costs to be propor-

62. *See* 42 U.S.C. § 300g-1(b)(3)(C), -1(b)(6)(A) (Supp. II 1996).

63. Industrial Union Dep't, AFL-CIO v. American Petroleum Inst., 448 U.S. 607, 655 (1980) (plurality opinion).

64. *See* PERCIVAL ET AL., *supra* note 28, at 511-13 (detailing OSHA's actions after the Supreme Court decision).

65. Risk assessment has received as much criticism on the basis that it demands precision well beyond the reach of the available data at least as frequently as has cost-benefit analysis. *See, e.g.*, David Doniger, *The Gospel of Risk Management: Should We Be Converted?*, 14 Envtl. L. Rep. (Envtl. L. Inst.) 10,222, 10,223 (June 1984); Lisa Heinzerling, *Regulatory Costs of Mythic Proportions*, 107 YALE L.J. 1981, 2042-2070 (1998).

tionate.[66] Disputes and litigation will inevitably arise concerning where the relevant margins are located,[67] and those disputes will revolve around the results of "formalized and quantified" analytic methods indistinguishable from methods used in a CBA.

Presently, environmentalists are very skeptical of any CBA-based framework, as reflected in their solid opposition to the CBA-based reform measures put forward throughout the 104th Congress.[68] That opposition, however, was significantly driven by the specific proposals themselves and the identity of the most vocal advocates for them. That combination produced a widely-shared concern that the actual purpose of those proposals was, and their ultimate effect would be, to derail environmental initiatives by imposing informational and analytical burdens on environmental regulators that would hamstring their ability to implement strong measures whether or not they were cost-beneficial. They feared "paralysis by analysis" that strategically turns CBA into an anti-regulatory weapon rather than a regulatory tool.

Feasibility-based frameworks are not immune from regulatory paralysis, however, as OSHA's history with workplace exposure to benzene demonstrates.[69] It is hard to see how or why an environmentally-sensitive CBA-based framework[70] that employs WTA for environmental benefits, employs WTP for costs, adjusts appropriate values to account for the complexities of the public's attitudes toward different qualitative aspects of risk, permits the non-tie-breaker use of non-quantified values, and is placed in the hands of "an environmentally sensitive agency" would present any more significant implementation obstacles than a hybrid approach that began with feasibility analysis but contained provisos for disproportionate costs and insignificant

66. "Even the cost of compliance, usually taken as a straightforward economic measurement, is subject to great uncertainty." P. 167.

67. Any suggestion that the risk, benefit, and cost assessments inherent in the hybrid approach will be easier than those under CBA result from the "easy" examples that Professor Farber uses to illustrate. For example, once the city of Duluth installed a filtering system for its water supply that removed 99.9% of its asbestos content, the estimated risk of fatalities from asbestos-related cancer among Duluth's citizens fell to something in the range of 1 death every 600 years. In that case, the $200 million that Reserve had to invest in changing to a land-based disposal of its mill tailings is easily "grossly disproportionate" to the benefits. P. 174. There is no need to worry about *precise* quantification of costs and benefits to draw that judgment. Such easy cases, however, can be found under a cost-benefit regime, too. In fact, Professor Farber says as much with respect to the *Reserve Mining* case itself. Pp. 174-75.

68. For an account of regulatory reform efforts during the 104th Congress, see Glickman & Chapman, *supra* note 17.

69. *See supra* text accompanying notes 64-65 (discussing the aftermath of the *Benzene* decision).

70. *Eco-pragmatism*'s hybrid approach itself employs a CBA that is described as an "environmentally-sensitive analysis — using a high value of life, conservative risk estimates, and a low discount rate for future benefits." P. 116.

risks. Conversely, it is not clear why one would be superior to the other in the hands of an environmentally hostile agency, or when confronting an unsympathetic judiciary. As Professor Farber himself declares, "Sometimes attitude counts for more than technique" (p. 91).

III.

Practical considerations do not clearly favor the hybrid framework over CBA. In the end, though, *Eco-pragmatism*'s argument does not rest on such considerations. Professor Farber argues that the "most fundamental difficulty" confronting cost-benefit analysis, including environmentally sensitive cost-benefit analysis, is that it "fail[s] to acknowledge the nature of our national commitment to the environment" (p. 96). The hybrid framework, on the other hand, is faithful to that commitment (p. 131). This Part argues that we simply do not know enough about the general nature of that commitment to determine whether its structure favors Professor Farber's hybrid approach or CBA.

We might approach an inquiry into the nature of our commitments from the perspective of environmental philosophy, and attempt to resolve the dispute between ecocentric philosophies that argue for protecting the environment because of its inherent or intrinsic value and homocentric, welfarist philosophies that value only human well-being as expressed in the private preferences people have for various goods and services. If we do, though, Professor Farber argues that we are not likely to develop a constructive, practical approach to environmental questions. "In effect, we are being given the following recipe for deciding environmental policy issues: '*Step 1*: Settle the question originally raised by Plato by providing an indisputable definition of the nature of "the good." *Step 2*: Apply the results of step 1 to the particular problem of environmental quality' " (p. 40). This argument from the futility of resolving such abstract disputes has long been a staple of pragmatist thinking.

Instead, Professor Farber presents our national commitment as an empirical fact. Americans simply have expressed a strong commitment to preserve and protect the environment. It is not necessary to ground this commitment in an abstract philosophical defense, and a practically minded policymaker will not undertake the attempt. "[T]he reason most people value the environment is emotional, not because of some elaborate syllogism. . . . Values are simply not things that normally require rational justifications."[71] Policymakers operating under pragmatist precepts need not invest in finding a more philosophically grounded explanation for the environmental values that

71. Daniel A. Farber, *From Plastic Trees to Arrow's Theorem*, 1986 U. ILL. L. REV. 337, 345-47.

people have, but should simply move on to understanding the meaning of those values and whether or not they produce sensible results when placed into action.

Pragmatists are wary, though, of all abstractions, not simply those seeking to bog us down in endless philosophical disputes. The claim that we are "committed" to "environmental values" is, pragmatically speaking, too abstract to be useful. The emotional becomes the programmatic only as it takes concrete form in situations that place our commitments under the tension of opposing preferences, values, or emotions. Just so, the pragmatist urges us to focus on how people behave in order to determine what they believe. "The essence of belief is the establishment of a habit .... [T]he whole function of thought is to produce habits of action .... To develop its meaning, we have, therefore, simply to determine what habits it produces, for what a thing means is simply what habits it involves."[72] The truth of a belief is established by its "cash value," as found in the consequences of the idea in the realm of action.[73] Consequences only accrue to beliefs when they are made concrete through action.

What actions are relevant in determining the nature of our commitment to the environment? Once again, Professor Farber judiciously avoids taking sides in a dichotomous dispute between private and public values. Tree-huggers favor politics while bean counters favor markets as the institutions that best express the values upon which policy ought to be based (p. 37). The market privileges self-regarding, or private, values. Guided by our private preferences, each of us calculates which set of market exchanges maximizes our own self-interest. In principle, the political realm privileges public values. Farber's argument here heroically abbreviates an enormous debate within political theory, not so much over the values that actually influence public decisionmaking, as to which almost everyone acknowledges that private values play a prominent role, but rather over what kinds of values ought to influence public decisionmaking.

Tree huggers, Farber argues, side with neorepublicans, who have revived the view that when making public decisions, public-regarding values should control, and deliberation that offers reasons, rather than market exchange that offers currency, should provide the forum in which the public's business is transacted.[74] In insisting that public val-

72. Charles Sanders Peirce, *How to Make Our Ideas Clear, in* PRAGMATISM: A READER 26, 33-35 (Louis Menand ed., 1997).

73. WILLIAM JAMES, PRAGMATISM AND FOUR ESSAYS FROM THE MEANING OF TRUTH 46 (Ralph Barton Perry ed., 1955); *see also* James T. Kloppenberg, "An Old Name for a New Way of Thinking?," *in* Dickstein, *supra* note 32, at 84 ("The early pragmatists sought to reorient philosophy away from interminable and fruitless debates by insisting that ideas should be tested in practice.").

74. The neorepublican literature is vast. For one recent assessment, see PHILIP PETTIT, REPUBLICANISM (1997).

ues are all that matter in environmental decisionmaking, however, tree huggers express a "disdain for the value of private life" (p. 36). The bean counters make the reciprocal mistake of dismissing public deliberations over values as cheap talk, mere rhetoric masking an underlying universal pursuit of private gain. Along the public-private continuum, these two methodologies stand at opposite ends.

Eco-pragmatism argues that a more satisfactorily integrated view of the self acknowledges that public values, as expressed in arguments we make and reasons we give about collective decisions, and private values, as expressed in what resources we are willing to give up in order to achieve an objective, are both genuine human values entitled to be taken into account. Because human well-being is a desideratum that democratic government ought to pursue, government policy needs to take into account the burdens that it imposes on citizens, as well as the benefits that it generates, for burdens have an impact on individual well-being just as assuredly as benefits do. In keeping with a principle of democratic equality, the evaluations of policy effects on individuals made by the individuals themselves enjoy a presumption of legitimacy.[75] Paternalistic overrides of those judgments are not entirely out of bounds, but refusing even to consider those judgments in the first place is unjustified. Accordingly, a more acceptable understanding of the interaction between politics and the market would not totally reject one in favor of the other, but would see that "[g]overnments and markets are both flawed, but useful, institutions" (p. 58). Together, these beliefs commit Professor Farber to a policy-making structure that accepts the presumptive legitimacy of both private and public values, as expressed in both political and market arenas.

A pragmatist, then, would seek to incorporate the actions of individuals in both private decisionmaking contexts and in public contexts when trying to discern the "habits of action" that must be the true metrics on which the nature of our belief in environmental values needs to be calculated. The inquiry would be both comprehensive and detailed.

The study of how people say they translate their environmental values into action has become a staple of the survey research industry, and so survey results provide a good starting point for that inquiry. One type of question directly probes whether people have changed their private behavior in response to environmental concerns. In one such survey, 54% report that they have made some changes in day-to-

75. *See* p. 68; *see, e.g.*, ROBERT A. DAHL, DEMOCRACY AND ITS CRITICS 100-01 (1989) (defending the presumption of personal autonomy, which states that "in the absence of a compelling showing to the contrary everyone should be assumed to be the best judge of his or her own good or interests" (emphasis omitted)).

day behavior because of their environmental concerns.[76] Self-reporting of time spent working for various volunteer causes indicates the average responder spent about eight hours, over a month's time, working in some way for environmental causes.[77] Sixty-five percent report that they have made a financial contribution to some environmental organization working in their local community[78] while even more, 75%, say that they have contributed to a national environmental organization.[79] Overwhelming majorities report that they have voluntarily recycled newspapers, glass, aluminum or motor oil,[80] cut home energy use by increasing building insulation or improving the home's heating or air conditioning system,[81] reduced water use,[82] and avoided purchasing or using aerosol spray cans.[83]

These behavioral changes provide solid evidence that concern about the environment has had practical consequences in people's lives. The picture, though, is not monochromatic. As of 1999, only 42% had cut down on automobile use by car-pooling or taking public transportation,[84] and a mere 29% had decided not to buy a product because of its producer's environmental record.[85]

Do such data as these allow us to determine whether the environmental commitments that lie behind them are biased in favor of environmental values in the fashion expressed by the hybrid framework, or are they more consistent with an alternative explanation, such as that individuals are performing informal cost-benefit evaluations in deciding what decisions to make? The data are much too imprecise for us to determine such details of the value structure that underlies them. Many of the environmentally friendly measures that receive high positive response rates — cutting home insulation, upgrading air conditioners and heaters, cutting water use, not using aerosol cans — are of-

76. 1993 Cambridge Reports National Omnibus Survey, July 1993 (Question: "Over the past several years have you made any changes in your day-to-day behavior because of your concerns about the environment?" Response: Yes, a lot — 22%; Yes, some — 32%) (survey results on file with the author).

77. Gallup Survey, June, 1996 (Question asked for people's "best estimate" of "hours spent in the past month" in a number of named areas, including the environmental) (survey results on file with author).

78. Belden and Russonello, Ecology Survey, February, 1996 (survey results on file with author).

79. *See id.*

80. Ninety-three percent say they have engaged in such activities. Gallup Survey, CNN/USA Today Poll, April, 1999 (survey results on file with author).

81. Seventy-four percent say they have done so. *See id.*

82. Sixty-nine percent report they have "cut [their] household's use of water." *Id.*

83. Sixty-seven percent say they have refrained from using aerosols. *See id.*

84. *See id.*

85. *See id.*

ten very cost-effective for the individual consumer in addition to being environmentally friendly, or else may impose negligible costs. Such actions are as consistent with individual economic self-interest (or indifference) as they are with strong environmental preferences. In contrast, where economic self-interest is more in tension with a pro-environmental response, such as actions that impose more significant personal cost, perhaps in terms of the personal convenience and mobility that people value, such as car-pooling, using public transportation, or boycotting a producer because of its environmental record resulting in purchasing something the consumer otherwise would not have preferred buying, have much lower positive responses.[86]

Even questions whose responses reflect some willingness to trade off other preferences for environmental values provide few insights into someone's commitment to environmental values in those hard cases in which *significant* conflicts exist, as in the abatement of significant risks that requires the expenditure of considerable resources. Answers to questions about voluntary behaviors, for example, tell us that individuals will elect to spend some time working for environmental causes when they could have spent the time in alternative ways, such as leisure, but that information says nothing about what trade-offs would be chosen by them when environmental regulation becomes very much more expensive than the opportunity costs of spending eight hours per month on environmental projects.[87]

Turning to actions in the public forum, we find data compatible with those from the private realm. A citizen's central action in the

86. The series of questions that elicited the responses in the text accompanying notes 80 to 85 sought to identify actions taken for the reason that they benefited the environment, by asking, "which of the following things, if any, have you or other household members done in recent years to try to improve the quality of the environment?" It is possible that the lower response rate for car-pooling and public transportation is because persons who were engaging in such activities for self-interested reasons, such as saving money, or avoiding the stress and delays of rush hour traffic, would not have responded in the affirmative to the question. It seems unlikely that this explains all of the negative responses, however, and more likely that a good part of it is attributable to the conflict between the personal costs of giving up the convenience of driving to work and the environmental benefits of doing so.

87. Other questions revealing a willingness to make some trade-offs between economic self-interest and environmental quality include ones that ask people, "How much more per month would you personally be willing to pay for all the goods and services you use as a consumer, if you knew that as a result ... business and industry ... would not harm the environment?" Between 1984 and 1990, the mean response to this question rose from $10.23 to $36.99 monthly, measured in constant 1990 dollars. *See* WILLIAM KEMPTON ET AL., ENVIRONMENTAL VALUES IN AMERICAN CULTURE 5 (1995). The 1990 figure represents approximately 1% of the median family annual income in the United States, which was $42,400 in 1990. United States Census Bureau, Historical Income Tables — Families, Table F-7 (visited July 1, 1998) <http://www.census.gov/hhes/income/histinc/f07.html>. These responses are consistent with a belief that the environment can be saved without facing harder trade-offs between economic prosperity and environmental quality, *see infra* notes 112 to 114 and accompanying text, but they may or may not be consistent with a commitment to all feasible environmental protection measures, save those with grossly disproportionate costs, as required by the hybrid framework.

public arena comes when he or she votes for candidates for elected office.[88] In 1994, 41% of those polled said that a high favorable rating of a candidate for Congress by environmental organizations would make it more likely that the responder would vote for that candidate.[89] Reflecting just how much the environment has become a "valence issue," only 10% said such a rating would make it *less* likely that they would vote for a candidate (the remainder said the rating would not affect their votes).[90] The House Republicans' failure to read these results precipitated their run-in with the voters over environmental deregulation after taking control of Congress in 1994.[91]

Besides probing how candidates' positions on environmental issues affect the electorate, surveys also poll on the environmental policies the public favors. While these responses provide valuable information regarding public policy, they once again fall short of revealing the underlying value structure that supports these preferences.

One question has been asked twice a year since 1973, in the spring by the National Opinion Research Center's General Social Survey (GSS), and in the fall by the Roper organization, so that it provides a particularly valuable set of data for analysis. The question asks whether the responder thinks that spending on "improving and protecting the environment" is too little, about right, or too much. The data show variations from a finding of 61% reporting that spending was "too little" in 1973, down to a low of 47% in 1977, a mark that was almost equaled again in 1980. This figure rebounded during the Reagan-Bush years, increasing to almost 70% in 1991. The response rate fell back to 59% in the 1993 GSS Survey.[92] An important intervening event between 1991 and 1993, of course, was the 1992 presidential election in which Democrat Bill Clinton defeated Republican George Bush. Because the GSS polls in the spring, President Clinton had not had time to affect the actual amount of money the federal government was spending on environmental regulation before the 1993 survey was taken. Therefore, the dip in the "too little" response was not correlated to any increase in spending. This may suggest that

88. Contributions to national environmental organizations ought to be considered public forum activity, as well, insofar as most environmental organizations engage in significant lobbying activities.

89. Mellman, Lazarus, and Lake, Environmental Message from the 1994 Electorate Survey, November, 1994 (survey results on file with the author).

90. *See id.*

91. *See supra* text accompanying notes 18-22.

92. *See* Euel Elliott et al., *Political and Economic Determinants of Individuals' Support for Environmental Spending*, 51 J. ENVTL. MGMT. 15, 20 (1997). Those responding "too little" dropped back into the low 60s and high 50s during the Clinton administration. In 1996, the GSS reported the percentage as 61%. Trend Table for the GSS Question, NATENVIR (visited Nov. 1, 1999) <http://www.icpsr.umich.edu/gss99/trend/natenvir.htm> [hereinafter GSS Trend Tbl.].

these responses reflect the public's general sense about whether environmental policy is on the right track. Because the Democratic party routinely receives higher marks than the Republican party in its management of the environment,[93] more people in 1993 may have concluded that the environment was in good hands under President Clinton than in 1991 under President Bush.

When those responding "just right" to this spending question are added to the "too little" responders, we see that there is very little support for reductions in spending. The two consistently combine for totals in the 80% range. In 1996, for instance, this figure was 89%.[94] Polled recently about what priorities the federal government should address with the anticipated federal budget surpluses, 86% responded that "increasing spending on domestic programs, such as health, education, and the environment" should be either a top priority or an important priority.[95] Answers to questions such as these reflect an individual's sense of government priorities, but not in a context that forces them to evaluate how much worse off they are prepared to become economically in order to support higher environmental values or more government spending. In answering these questions, responders may be premising their responses on an assumption that increased government spending for the environment would be paid for by shifts of resources from other parts of the federal budget, or, in the case of the surplus related questions, by spending money that the government has already raised, and that it would spend elsewhere if not on the environment. In either case, their responses do not tell us what trade-offs they are prepared to make or even how stringent they believe environmental controls should be.

Sometimes, however, surveyors pose questions that frame individual level trade-offs more explicitly. When asked to agree or disagree with the idea that "we must protect the environment even if it means increased government spending and higher taxes," 71% still expressed agreement.[96] Even here, though, people may be thinking that most of the taxes will be paid by someone else. When the question propounded becomes even more personal, the distribution of responses changes. In response to the question, "How willing would you be to

93. A standard survey question asks, "Please tell me ... whether you have more confidence in the Democrats in Congress or the Republicans in Congress to deal with protecting the environment." From 1993 to 2000, responses favoring Democrats have ranged from 52% to 60%, while responses favoring Republicans have ranged from 21% to 36%. Various surveys (on file with the author).

94. *See* GSS Trend Tbl., *supra* note 92.

95. N.P.R./Kaiser/Harvard Kosovo Survey, April 1999 (survey results on file with the author). The survey did not ask a question that isolated environmental programs from other domestic programs.

96. CBS News/New York Times Survey, April 1990 (survey results on file with the author).

see a reduction in spending on the environment if you knew it would mean that *you would pay lower taxes*," 62% responded that they would be either very willing (18%) or somewhat willing (44%).[97] On the other hand, to a CBS News query of whether "you [would] be willing to pay $100 a year more in taxes if the money were used for a special fund to clean up the environment," 68% responded affirmatively.[98]

Comparing this last question to another similar one may reveal something of how the public's sense of the trustworthiness of government impacts on their willingness to approve increased spending. When CBS asked simply if "you [would] be willing to pay $100 a year more in federal taxes in order to increase spending on protecting the environment," only 42% expressed willingness.[99] It may be that the reference in the first question to a "special fund" set up for the purpose suggested a specially arranged set aside, which provided individuals greater confidence that the money would actually be used for environmental purposes, rather than diverted to projects which they supported less.

An especially strongly worded question put to the public with some regularity asks for agreement or disagreement with the statement that "protecting the environment is so important that requirements and standards cannot be too high and continuing environmental improvements must be made regardless of cost." Throughout the Environmental Era, strong majorities have agreed with this statement.[100] These responses suggest the public's attitude toward environmental

97. Business Week/Harris Poll, October, 1993 (emphasis added) (survey results on file with the author).

98. CBS News Survey, March, 1991 (survey results on file with the author).

99. CBS News Survey, January, 1990 (survey results on file with the author).

100. For data through the late 1980s, see Robert Cameron Mitchell, *Public Opinion and the Green Lobby: Poised for the 1960s?*, *in* ENVIRONMENTAL POLICY IN THE 1990S 81, 85 (Norman Vig & Michael E. Kraft eds., 1990). For more recent data, see various questions polled by the Wirthlin Worldwide and the CBS/New York Times News Poll in Westlaw's "Poll" database. In the late 1990s, the majorities agreeing with this statement have fluctuated between 57% and 76%. More detailed data analysis shows agreement rates are strong across all demographic and racial groupings, but far from uniform. Interestingly, on this question, as education or income increase, agreement with this statement declines. For example, in a 1997 CBS/New York Times survey, those with less than a high school education were 62% in agreement; those with a post-graduate degree were 46% in agreement. People with less than $15,000 annual income agreed 66% of the time; people with greater than $75,000 annual income did so 38% of the time (survey results on file with the author). The results here differ markedly from the claim made in *Eco-pragmatism* that "environmental values become stronger and more sophisticated as children undergo intellectual development, and well-educated adults are markedly more pro-environmental." P. 67. Perhaps these results can be reconciled by hypothesizing that the poll responses are most affected by individuals becoming more sophisticated as they acquire more education, in that they come to realize that trade-offs between environmental quality and other competing values must be made. *But see infra* text accompanying note 103 (reporting positive correlations between increased education and pro-environment responses to a different question).

protection tilts more to the "tree huggers," those prepared to protect the environment regardless of the cost, than it does to the "bean counters," who always want to weigh costs and benefits before deciding what to do. I believe that Professor Farber himself would argue, however, that while this may be people's initial, or prima facie, attitude toward the environment, once the costs have been specified and presented in a less abstract manner, people become unwilling to incur any cost in order to improve the environment.[101] If this reservation is sound, it underscores a general observation about responses to environmental policy questions: like the private behavior data, the public forum data are too general and imprecise to support any conclusion that the public has become committed to the hybrid framework, as they fail to illuminate the details of the value structure that underlies the public's responses.

Perhaps something more can be learned about "our" national commitment to the environment through a better understanding of the characteristics of those among us who most strongly exhibit this commitment. A number of different demographic analyses have been performed on the GSS/Roper spending question results, inquiring into which individual characteristics are positively correlated with the pro-environment response that we are spending "too little" on the environment. The best predictor of positive attitudes toward the environment is age — the younger responders are consistently more environmentally concerned than older responders. This finding might indicate that American support for environmental quality is increasing over time, or it may indicate that "the present value of a clean environment is greater for those who expect to live longer."[102] Education also correlates positively with the pro-environment response,[103] but without knowing what the better-educated have learned, it is impossible to say whether they have acquired a bias in favor of environmental protection supporting the hybrid framework, or a more refined sense of the costs of environmental degradation, thereby supporting more environmental protection on cost-benefit grounds.

Factor analysis provides some insight into the major features of an environmental decisionmaking situation that affect an individual's thinking about environmental issues. Relying upon a series of questions included in the 1995 American National Election Survey pilot project that were "designed to measure attitudes toward the environ-

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101. *See, e.g.*, p. 73 ("When first thinking about toxics problems, many people begin with the notion that carcinogens are bad things and should be eliminated from the environment at all costs. Statutes written that way are usually stymied in the implementation phase because society simply is unwilling to close down entire industries.").

102. P. 22; *see also* Jones & Dunlap, *supra* note 18, at 38 (reporting similarly that age is the best predictor of a pro-environment response to the spending question).

103. *See id.*

ment and environmental policy,"[104] statistical analysis indicates that people's attitudes toward measures to improve environmental quality are composed of two primary factors and one secondary factor. First, for many people, support for pro-environmental polices varies inversely with one's desire for economic growth. Many people view "economic concerns and environmental concerns like a seesaw — i.e., as one rises, the other falls."[105] Some are more willing to bear the inroads on economic growth they believe to be associated with environmental protection, while others, who may not oppose all environmental protection, but for whom "economic concerns trump environmental concerns," are less willing.[106] Second, people's support of environmental protection measures varies inversely with their hostility toward government regulation. Such hostility influences attitudes toward environmental quality or protection measures because people anticipate that those measures will be implemented through governmental regulatory structures.[107] Finally, people's perceptions of the current condition of the environment affect one's support for environmental measures. Overall, "concern regarding environmental regulation [by the government] and economic concerns . . . mostly dominate one's level of support for environmental policy," with one's assessment of "the actual condition of the environment [also contributing] to his or her environmental policy attitudes."[108] These findings add further to our understanding of popular sentiment, but not in ways that would permit one to say that they demonstrate public commitment to the hybrid framework.

Cumulatively, all these findings flesh out a picture of a majority that generally supports environmental quality measures, is willing to act on that preference in both their private and public lives, and that understand issues of support for environmental quality measures to pose choices both about the mix of economic growth and environmental protection, and about the acceptability of government regulation that comes with the implementation of those measures. People also express significant and sustained support for the level of environmental protection that we currently have. Their strong opposition to relaxing standards and controls indicates that their preferences are quite sticky on the downside.

On the other hand, survey responses give us little general insight into how individuals respond to specific environmental projects once

104. Christopher Jay Carmnan, *Dimensions of Environmental Policy Support in the United States,* SOC. SCI. Q. 717, 723 (1998) (quoting STEVEN J. ROSENSTONE ET AL., AMERICAN NATIONAL ELECTION STUDY (1995) (internal quotation marks omitted)).

105. *Id.* at 721.

106. *Id.*

107. *See id.*

108. *Id.* at 725.

they are informed about the costs of those projects, the impact of them on economic growth, or the specific environmental risks involved. Asked about reductions in environmental protection that would produce real tax rebates in their pockets, a majority opt for the reductions, whereas when asked about programs in contexts in which it is permissible to speculate that someone else will bear much of the costs, favorable responses improve.[109]

In particular, polling data shed little light on whether people entertain anything that might meaningfully be called a presumption in favor of maximum feasible environmental protection, as Professor Farber claims. The data tell us little about the structure of the beliefs and opinions that contribute to producing people's decisions. Someone who generally thought that a cost-benefit approach to problemsolving made sense might well have the general positive attitude toward environmental protection reflected in these data, if that person presumed that our historic inattentiveness to environmental harms, or the severity of newly created environmental problems, meant that even fairly costly control measures would satisfy a cost-benefit analysis. Such a person might, therefore, adopt a "presumption" in favor of environmentally protective measures, in the weak sense of being initially disposed to believe that most environmental problems can be attacked in a cost-beneficial manner; but it would not be a strong presumption favoring regulation to the point of feasibility. One's decisions about environmental programs depend upon background beliefs about the state of the environment, the costs involved, and the nature of the government intervention required — but survey questions do not establish these background beliefs in routine questioning about environmental attitudes and thus do not provide a basis for extrapolating to more specific articulations of our global commitments.

Not only are the data insufficient to support any strong presumption in favor of environmental controls, but the public's response to certain environmental problems actually seems inconsistent with such a presumption. Global warming provides a significant example. Even though it is now undeniable that the level of greenhouse gases in the atmosphere is increasing, activists concerned with the problem of global warming have had little success in developing a strong constitu-

109. The entire discussion of public attitudes here has ignored some significant distributional questions, both in terms of geography, where attitudes toward public land policy, for instance, in the Western states may vary significantly from attitudes in the East, and in terms of race and ethnicity, where attitudes toward toxic waste cleanup, for instance, may vary significantly among different racial or ethnic groups. Were one to attempt to implement environmental policies exclusively on the basis of whether or not they properly expressed "our" national environmental commitments, one would need to face a substantial question of who the "we" are whose commitments should be respected. The discussion here has almost entirely bracketed these distributional issues, and has aimed to show that at the national level, we are not capable of determining the shape of the nation's commitment to the environment.

ency for abating anthropogenic greenhouse gases. One concerned scientist has remarked that the public's attitude toward this problem reflects "the default assumption" of "full speed ahead: It's better to ignore the possibility of a problem until it hits you in the face."[110] Such a default assumption is the direct opposite of a presumption in favor of feasible controls. More generally, some longtime experts on American environmental attitudes have difficulty seeing the national environmental commitment that Professor Farber says is unmistakable. Denis Hayes, coordinator of the first Earth Day, has initiated a project called Earth Day 2000, the aim of which is "to forge a global majority around environmental values," a project in which the United States should be in the forefront, but cannot be, he says, because we are "backsliding" at home.[111]

Riley Dunlap, another longtime analyst of American environmental attitudes, has described our environmental dispositions as showing a "clear consensus," but an "ambiguous commitment."[112] The commitment is ambiguous because Americans have not thoroughly considered how they would trade competing values with environmental values in hard cases.

> The growing belief in ecological limits and the increasing value placed on environmental quality are widely interpreted as constituting a change in our society's basic worldview or social paradigm, for they challenge the way in which Americans have traditionally viewed their relationship to the natural environment. Most Americans certainly have not fully embraced this emerging ecological world view, especially its lifestyle implications, nor clearly comprehended the contradictions between it and traditional values such as economic growth, free enterprise, and private property rights.[113]

Everett Carll Ladd, president of the Roper Center for Public Opinion Research, joined with Karlyn Bowman of the American Enterprise Institute in another recent assessment of public attitudes toward the environment. They, too, found an enduring positive attitude toward environmental quality, but one that combined with an optimism that continuing environmental improvement could be balanced with satisfactory economic growth, as well as with a faith in technological progress as providing a sufficient solutions to our environmental problems, such that severe economic dislocations or dramatic lifestyle changes

110. Geneva Overholser, *Global Warming Isn't a Hot Issue — Yet*, DURHAM HERALD-SUN, Dec. 16, 1999, at A16 (quoting Jane Lubchenco, past president of the American Association for the Advancement of Science).

111. *Id.*

112. Riley E. Dunlap, *Public Opinion in the 1980s: Clear Consensus, Ambiguous Commitment*, ENVIRONMENT, Oct. 1991, at 10.

113. Riley E. Dunlap, *Public Opinion and Environmental Policy*, *in* ENVIRONMENTAL POLITICS AND POLICY: THEORIES AND EVIDENCE 63, 105 (James P. Lester ed., 2d ed. 1995) (citations omitted).

would be unnecessary.[114] They cannot tell us whether Americans would be strongly committed if such optimism proved wrong or if technological solutions at modest costs proved insufficient.

The picture of public attitude painted by Dunlap, Ladd, and Bowman stands in considerable contrast to that suggested in *Eco-pragmatism.* Americans may express support for environmental protection measures, but apparently in the context of a belief that environmental quality can be achieved at an acceptable cost and without significant personal sacrifice. While such support manifests a general pro-environment attitude, citizen reactions to specific choices that may make heavy personal demands on us or pose costs that are substantial in relation to benefits remain inchoate.[115]

Professor Farber deploys his understanding of the nation's environmental commitments primarily to justify the hybrid approach to environmental regulation employed by the legislature and administrative agencies. In addition, though, it also plays a role in his defense of a "green canon" of statutory interpretation, which he advocates that courts should use in interpreting legislation (p. 125). "The hybrid approach would suggest interpreting ambiguous statutes to cover significant environmental risks (with an escape hatch for infeasibility)" (p. 124). He argues that a green canon embodying this suggestion can be defended independently on grounds of plain meaning, legislative intent, and dynamic interpretation, thus making it defensible regardless of which approach to statutory interpretation one might adopt (pp. 124-27).

Our national commitment to the environment relates to the third of these interpretive approaches, dynamic interpretation, which proposes that judges should interpret ambiguous statutes in light of evolving community norms (p. 125). If the content of our national commitment to the environment remains inchoate and much more ambiguous than Professor Farber supposes, as I have argued, it follows that the argument for a green canon based on dynamic interpretation is significantly weakened.

The argument based on congressional intent likewise fails to underwrite a generally applicable green canon. While it is true that Congress "has applied some form of the hybrid approach" with some "frequency" in its statutes, this does not support the conclusion that it is "plausible to assume that this was the legislative intent in a given case

114. *See* EVERETT CARLL LADD & KARLYN H. BOWMAN, ATTITUDES TOWARD THE ENVIRONMENT 1-25 (1995).

115. The public may sometimes support some environmental measures because they perceive that the damage far outweighs the costs. Proponents of strong environmental legislation have regularly taken advantage of perceived threats or a sense of crisis to move legislation forward, for example. Backing strong action against a serious threat can be quite consistent with a cost-benefit mentality as with a maximum-feasible-regulation mentality.

even if the language used is somewhat ambiguous" (p. 125). Congress has also frequently used health-based approaches as well as risk-benefit balancing approaches to environmental regulation;[116] feasibility analysis is hardly so dominant among these approaches as to support a general presumption in its favor. Indeed, Congress almost invariably identifies the regulatory standard to be employed with sufficient specificity to target which of these basic types should be used, so that failure to do so in any specific instance may equally support the conclusion that Congress has left the matter to agency discretion. Finally, the plain meaning of NEPA — Professor Farber's third basis of support for the green canon — also fails to provide a convincing rationale for embedding the hybrid approach in a canon of statutory interpretation.[117]

Although the text of *Eco-pragmatism* is not entirely clear on this point, there may be a second dimension to Professor Farber's green canon, other than the suggestion that the hybrid approach to standard setting should be read into otherwise ambiguous statutes. When Professor Farber states that "the hybrid approach would suggest interpreting ambiguous statutes to *cover* significant environmental risks (with an escape hatch for infeasibility)" (p. 124; emphasis added), this

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116. *See supra* text accompanying notes 34-36; *supra* note 36.

117. Professor Farber relies upon § 102(1) of the National Environmental Policy Act for his plain meaning argument. That section states that "Congress authorizes and directs that, to the fullest extent possible (1) the policies, regulations and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this chapter." 42 U.S.C.A. § 4332(1) (West 1998). The claim is that this language is "virtually identical" to the hybrid approach and hence embodies the green canon. Pp. 126-27. The central statement of NEPA's policy is set forth in § 101, which states that it is the

> continuing policy of the Federal Government . . . to use all practicable means and measures . . . in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can live in productive harmony, and fulfill the social, economic and other requirements of present and future generations.

42 U.S.C.A. § 4331(1) (West 1998). Professor Farber makes much of the phrase "to the fullest extent possible" in describing the extent to which statutes should be interpreted in accordance with NEPA's policies, but he makes too little of the policy statement itself, which contains a caveat of practicability, and which fails to resolve situations in which environmental values conflict with other elements of the "general welfare" or with other elements of the "social and economic . . . requirements" of present generations. A proponent of CBA could well argue that such trade-offs invite a cost-benefit approach just as easily as they invite a feasibility approach, in which case the interpretive principle to be found in NEPA would be that "to the fullest extent possible," courts and agencies should attempt to weigh costs against benefits. The principle would be, in other words, to do careful analysis of all the consequences, pro and con, before engaging in environmentally harmful activity — a principle entirely consistent with one of the underlying rationales of NEPA, which is to "enrich the understanding of the ecological systems important to the Nation." 42 U.S.C.A. § 4321 (West 1998). The essential accomplishment of NEPA was to place environmental values, which had until then often been ignored, on the list of mandatory considerations prior to agency action, but it did not commit policymakers to employing any particular methodology for considering them. *See generally* Strycker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223 (1980) (holding that NEPA was essentially procedural and left to agency discretion how environmental considerations would be balanced in an overall decisionmaking process).

may be meant to relate the green canon to the threshold issue of when enough information exists to bring a potential environmental harm within the jurisdiction of an environmental statute, rather than, or in addition to the subsequent issue of what standard should govern the regulation of that potential harm once it has been found to be within the statute's jurisdiction.[118] If this is correct, then Professor Farber seems to be advocating that ambiguous environmental statutes should be construed to authorize the abatement of potential environmental harm before we have completely convincing evidence that the harm would actually occur.

Such a presumption is widely used and useful. The issue of how much we must know before we can intervene was squarely faced in *Ethyl Corp. v. EPA*,[119] a case that stands alongside *Reserve Mining* at the headwaters of judicial application of environmental values. *Ethyl Corp.* raised the question of whether the EPA had enough information concerning the connection between lead additives in gasoline to adverse human health effects to support an agency order phasing down the lead content of gasoline under a statute authorizing regulation of additives that "will endanger the public health or welfare."[120] Writing for the en banc majority of the D.C. Circuit, Judge Skelly Wright agreed with the agency's construction of the statute to permit agency action in advance of rigorous proof of a cause and effect relationship between lead and adverse health effects. "Where a statute is precautionary in nature, the evidence is difficult to come by, uncertain, or conflicting because it is on the frontiers of scientific knowledge, the regulations designed to protect the public health, and the decision that of an expert administrator," such rigorous proof is not required.[121] Judge Wilkey in dissent insisted that "the causal connection between lead emissions and the harm must be established by relevant scientific and medical evidence" before the agency had authority to regulate lead in gasoline.[122]

Judge Wright's view has prevailed in the public arena, in Congress, and in the courts: one of the premises upon which our environmental regulatory regime stands is the conclusion that public action to pre-

118. A basis for this belief is Professor Farber's claim that the green canon would provide a firmer basis for the conclusion of the *Reserve Mining* court that it was authorized to proceed in a "precautionary or preventive sense," that is to say, in advance of firm evidence that the mining company's mill tailings would cause adverse health effects among the population of Duluth. P. 124 (quoting Reserve Mining Co. v. United States, 514 F.2d 492, 529 (8th Cir. 1974)).

119. 541 F.2d 1 (D.C. Cir. 1976) (en banc), *cert. denied*, 426 U.S. 941 (1976).

120. *See* Clean Air Act § 211(c)(1)(A), 42 U.S.C. § 1857f-6c(c)(1)(A) (1967) (transferred and codified as 42 U.S.C.S. § 7545 (c)(1)(A) (Lexis 1997)).

121. *Ethyl Corp.*, 541 F.2d at 27.

122. *Id.* at 95.

vent harm is appropriate in advance of completely reliable scientific verification of the inevitability of that harm should we fail to act.[123] This claim leaves much unsaid, as *some* factual basis for intervention is surely required, and the decision that certainty is not required before preventive action fails to clarify how much knowledge *is* required. Disagreements over what constitutes "good science," the desirability of conservative default assumptions, the use of worst-case scenarios, as well as standards of judicial review of agency action, all raise this issue, and these disagreements have continued unabated throughout the Environmental Era.[124] Still, this much of Professor Farber's green canon does have a solid pedigree in our practices, our statutes, and our broad attitudes toward environmental protection. It should be noted, though, that some precautionary action is entirely compatible with CBA: whenever the magnitude of some environmental damage, discounted by the probability that the damage will actually occur, exceeds the costs of prevention, CBA advocates the preventive measure.

To sum up this point, "our profound national commitment to the environment" cannot support the weight that Professor Farber rests on it, either to vindicate the hybrid approach to policy or the green canon of statutory interpretation.

That said, however, there is one particular type of environmental problem where stronger evidence in support of his "environmental baseline" can be found. When environmental harms pose a discernible risk to human life or threaten serious adverse health effects, it is possible to discern a public favoring maximum feasible environmental controls. Survey questions usually fail to distinguish between environmental issues, broadly defined, and those issues that implicate significant human health risks, so they cannot provide a source for exploring this distinction. The history of the entire environmental movement lends some credence to it, though. That movement achieved an entirely new level of policy significance when subtle environmental harms were linked to human health in the 1960s, as through Rachel Carson's pathbreaking *Silent Spring*, as well as through other

123. Congress later ratified Judge Wright's conclusion by amending the Clean Air Act to make the precautionary nature of the statute clearer. *See, e.g.*, Sanford Gaines, *Science, Politics, and the Management of Toxic Risks Through Law*, 30 JURIMETRICS J. 271 (1990) ("In 1977, responding to the vigorous contest over precautionary regulation in the case of *Ethyl Corp. v. EPA*... Congress amended several sections of the Clean Air Act... 'to emphasize the precautionary or preventive purpose of the Act (and, therefore, the Administrator's duty to assess risk rather than wait for proof of actual harm).' "). H.R. REP. NO. 294, at 51 (1977). The amendments specified that the EPA had authority to regulate not only pollutants that "may cause" [or "may endanger"] serious health effects (the original wording), but also those that "may reasonably be anticipated to result in" such effects. Pub. L. No. 95-05, S 401, 91 Stat. 790-91 (1977).

124. For a critique of some of the aspects of regulatory policy that raise the issue of action in the face of uncertainty, see Frank B. Cross, *Paradoxical Perils of the Precautionary Principle*, 53 WASH. & LEE L. REV. 851 (1996).

studies tying chemical exposure to dreaded health problems, most notably cancer, but also including birth defects and neurological deficits. While it is a matter of some controversy just how much of a role the human health link played in producing strong support for environmental policies,[125] that role was certainly substantial.[126] Furthermore, almost all of the instances of feasibility-based approaches currently in place within our existing environmental practices address human health risks.[127] One is drawn most strongly to Professor Farber's arguments for the feasibility framework, in my view, just to the extent that one has public health effects, rather than other sorts of environmental harms in mind.

Focusing on life-threatening environmental hazards brings new considerations into play in the choice between the hybrid framework and CBA. One problem that CBA-based frameworks face in addressing significant human health hazards has less to do with adopting a neutral stance toward the question of reducing environmental harm as it does with assuming a reductionist stance toward human life. Life effectively becomes a commodity under a fully monetized CBA, a production value, something whose worth can be captured, without remainder, by some monetary amount.[128] That we are reluctant flatly to declare that human life can fully be captured by some finite monetary value is strongly suggested by the behavior of our public officials. No official has ever defended an action that resulted in the loss of life by standing in front of constituents and baldly declaring that, "the experts told us that our decision would result in loss of life, and we could

125. *Compare* Donald T. Hornstein, *Self-Interest, Politics, and the Environment — A Response to Professor Schroeder*, 9 DUKE. ENVTL. L. & POL'Y F. 61, 73 (1998) (arguing that the "power of ideas" must be acknowledged as a crucial aspect of environmentalism's appeal) *with* Schroeder, *supra* note 3 (arguing that heightened concern over environmental causes of risks to human health may explain the political success of environmentalism early in the Environmental Era).

126. *See, e.g.*, GRAHAM, *supra* note 3, at 32-33 ("A key development in the 1960s was the emergence of national concern about environmental health. . . . By the 1960s national concern about public health returned to a question raised more than 100 years earlier: what harm did the ordinary surroundings of everyday life impose on human health? With the benefit of improving science, public attention turned to cigarettes and sweeteners, and to air and water pollution.").

127. *See* sources cited *supra* note 37. Professor Farber's own examples reflect this as well, when he notes that

> Congress has treated environmental risks as impermissible except when required by considerations of feasibility. Rather than cost-benefit analysis, Congress has adopted a pro-environmental baseline for the control of air and water pollution, carcinogens in the workplace, and hazardous waste sites, and much less often called for cost-benefit analysis or open-ended balancing.

P. 103 (footnotes omitted). In each of these cases of the feasibility approach, public health effects have been a dominant congressional concern.

128. *See* text accompanying notes 40-41.

have taken steps to prevent it, but they just would have cost more than a human life is worth."

Of course, it is always possible to interpret an action that stops short of 100% protection as having *implicitly* placed a value on human life. By brute computational force, that value can be determined by dividing compliance costs by the statistical estimate of the risk reduction achieved by the action. Thanks to the requirement that agencies prepare regulatory impact assessments for major rules, agencies routinely provide the data to permit at least an approximate calculation.[129] Nonetheless, in much the same way as Holmes's dog could tell the difference between being kicked and being tripped over,[130] there remains an enormous difference between explicitly declaring human life to have finite value and implicitly doing so. Embracing the pricelessness of life constitutes a "useful nonsense." "It is useful to talk that way, thereby inclining our minds to place high value on life, precisely because we constantly must act in ways that cause that value to be jostled and compromised by competing values."[131]

Against this background, a feasibility framework provides a way to talk about some of the more significant obstacles to eliminating all manmade risk without being compelled to express the competition of clashing values in simple dollar-and-cents terms. In fact, if you listen to the way people debate life and death decisions, they seldom frame the choice as a stark issue of life versus dollars. If anything can be legitimately put opposite human life on a balance scale, it is not "mere" costs, but rather the adverse impact that imposing those costs will have on the lives of others.[132] Opposing values are described qualitatively. Alternatively, costs figure in, not by virtue of an assessment that it would simply not be worthwhile to spend more, but rather because further action is infeasible — we are just unable productively to spend more, or the amount that would be required exceeds our ability to pay, not our willingness to pay. There undoubtedly is an element of

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129. Such agency figures, sometimes with adjustments, form the basis for the cost per life saved figures of the famous Morrall table. Although that table has been widely cited for the proposition that federal regulations vary enormously in their cost-effectiveness, Lisa Heinzerling has argued that the Morrall table overstates the variance. *See* Heinzerling, *supra* note 65. To the extent that regulations written under a non-CBA-based framework nevertheless roughly converge on how costly they are per life saved, this lends some credence to Professor Farber's observation that agencies will inevitably "peak" at the costs of regulations even when their statutory framework advises them not to do so.

130. O. W. HOLMES, JR., THE COMMON LAW 3 (Boston: Little, Brown & Co. 1881), *reprinted in* 3 THE COLLECTED WORKS OF JUSTICE HOLMES 109, 116 (Sheldon M. Novick ed., 1995).

131. GEORGE WILL, *"Life Is Priceless" Is Useful Nonsense*, *in* SUDDENLY: THE AMERICAN IDEA ABROAD AND AT HOME, 1986-1990, at 204, 206 (1990). This is a claim about the expressive function of law. Professor Farber notes different expressive function problems with CBA as well. *See* pp. 117-19.

132. *See infra* text accompanying notes 134-135.

word play in such distinctions as these. The stark reality is that both individually and collectively, we have other demands on scarce resources than creating a society with negligible risks of environmental harm. One reason additional risk-reducing measures are not affordable is that after a point, we listen to those other demands and devote resources to them, thereby having less left for the protection of life. Still, the word play engaged in when talking about feasibility and significant risk seems more felicitous in articulating people's relationships to these competing demands than the harsh terms of CBA.

Consider the EPA's experience in the early 1980s in dealing with the ASARCO plant near Tacoma, Washington.[133] The ASARCO copper-smelting plant's air emissions contained arsenic, a poison that the EPA's risk assessors projected would produce fatalities in the downwind population if left unabated. The EPA opened consideration of whether to require ASARCO to install best available control technology (BAT) at its facility, or whether to require greater-than-BAT controls. Pivotal to that question was a determination as to whether the residual risk remaining after BAT was in place ought to be considered "unreasonable."

The EPA sought public advice as to that question by holding a series of workshops and public meetings in the vicinity of the plant. At those gatherings, the choice was not framed as one requiring a determination of how much a human life was worth, which would then be compared with compliance costs, although compliance costs were very much on people's minds due to the human consequences those costs would have. Rather, because ASARCO claimed it would be unable to afford more stringent controls and would therefore be forced to close the plant if asked to install greater-than-BAT controls, the issue became one of jobs, impact on the local economy, and the adverse human impacts produced by unemployment contrasted with the human health risks of continued exposure to ASARCO's emissions.[134] ASARCO never defended against the more stringent controls by arguing that the lives that would be lost if the more lax standard were selected were not worth the money. Instead it contested the EPA's science, arguing that its emissions currently posed no health threat.[135]

Standards based on maximum feasible controls were explicitly advocated at the public hearings. The National Audubon Society testified at the ASARCO hearing,

> If EPA finds zero emissions of a pollutant to be impossible, they should set the standards at the lowest levels possible rather than at the levels

133. For a summary of these events, see Esther Scott, *The Risks of Asarco*, *in* ETHICS AND POLITICS 163 (Amy Gutmann & Dennis Thompson eds., 2d ed. 1990).

134. *See id.* at 168-70.

135. *See id.* at 170-71.

> achievable through pollution control technologies easily affordable by the polluting industries. In order to protect [the public] health, standards must be used to force technological innovation in pollution control rather than to simply reinforce the status quo.[136]

This sounds strongly reminiscent of the national commitment for which Professor Farber argues, but again, in the context of environmental hazards to public health.

Beyond whatever expressive norms discourage us from talking openly in neutral cost-benefit terms about loss of human life, arguments for maximum feasible controls in such situations also tap into a very strong corrective justice norm that drives many public policies. As traditional tort practice amply demonstrates, the common law long ago assigned to each of us an entitlement to be free from serious bodily injury at the hands of another. Tort law does not sanction the deliberate taking of the life of another by private acts.[137] Philosophical arguments about stylized dilemmas like the Trolley Problem sometimes produce results condoning the deliberative destruction of life to save other lives, but actual tort law does not authorize even that, save self-defense.[138] It is no wonder that some of the most rhetorically powerful moments in the meetings over the ASARCO plant emissions were those that invoked this norm, as when one resident of a downwind community remarked that having the plant in operation was like "somebody standing on the other side of the city line with a thirty-ought-six and firing it into Tacoma."[139]

In sum, something like the hybrid approach does seem to match up well with our commitments when human life is at issue in environmental decisionmaking. Among other things, this helps explain why

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136. *Id.* at 171 (quoting National Audubon Society testimony at ASARCO hearing).

137. So-called risk-versus-risk situations point to some of the difficulties of automatic translation of common law norms into the environmental era. In cases of risk-versus-risk, the risk-reducing policy move will produce changes that increase other kinds of risks. A particularly clear illustration arose in the EPA's recent rulemaking to review the ambient air quality standard for ozone. Some who contested tightening the standard pointed out that in the course of lowering the risks of lung-related health effects associated with heightened ozone levels, the EPA would be increasing the risk of melanoma, since atmospheric ozone screens out UV(B) radiation, which is associated with skin cancer. One of the grounds for the D.C. Circuit's reversal of the rulemaking was the EPA's failure to give risk-versus-risk issues closer attention. *See* American Trucking Ass'ns v. EPA, 175 F.3d. 1027, 1051-52 (D.C. Cir. 1999) (per curiam), *modified per curiam*, 195 F.3d 4 (D.C. Cir. 1999), *cert. granted*, No. 99-1257 68 U.S.L.W. 3734 (U.S. May 23, 2000) cross-petition granted, No. 99-1426 (U.S. May 30, 2000). On risk-versus-risk problems generally, see JOHN D. GRAHAM & JONATHAN BAERT WIENER, RISK V. RISK (1995).

138. *See* George C. Christie, *The Defense of Necessity Considered from the Legal and Moral Points of View*, 48 DUKE L.J. 975 (1999) (analyzing and refuting various interpretations of common law tort as authorizing the taking of human life to save the life of another); Judith Jarvis Thomson, *The Trolley Problem*, 94 YALE L.J. 1395 (1985) (describing classic moral dilemma in which a runaway trolley will kill five persons unless switched off the track, inevitably killing a passerby).

139. Scott, *supra* note 133, at 165.

environmental advocates often strive to relate their causes to such effects.[140]

I have one remaining query with respect to Professor Farber's hybrid framework, and that is to question whether his CBA-based "disproportionate costs" proviso squares up with how citizens typically think about competing values in such situations. Over the past several decades, considerable research has demonstrated that people do not view risk solely in terms of cold numerical calculations of expected mortality. They are sensitive to qualitative dimensions of risk situations as well.[141] Quite plausibly, the way people respond to considerations of cost is not adequately captured solely in dollar-and-cents terms either. People apparently do realize, as Professor Farber argues, that it is absurd to chase risk reduction regardless of the consequences, but it could well be that what matters to them with respect to those consequences turns importantly on factors such as the distribution of those costs, the qualitative impact the costs will have on whomever bears them, and so on, rather than, or in addition to, their dollar magnitude.

As a thought experiment, suppose it were discovered that Windows 98 contained a peculiar virus that can infrequently cause a personal computer to explode, potentially injuring its user. Statisticians have calculated that the five million copies of defective operating systems currently installed will likely produce three fatalities over the economic life of the operating system. At a cost of $75 per computer, Microsoft can replace the defective system with a different version, for a total cost of $375 million. Let's assume no one at Microsoft, which currently has cash reserves in the billions of dollars, will lose a job. The regulatory decision is whether Microsoft should spend $125 million per fatality avoided to eliminate the risk. *Eco-pragmatism*'s hybrid approach would veto this measure, on the grounds of grossly disproportionate costs.[142] Doesn't it seem plausible, nonetheless, that the government might order Microsoft to make the fix assuming the existence of a statute authorizing the action?[143]

140. Professor Farber notes that the *Reserve Mining* litigation itself acquired an entirely new level of urgency once the focus of harmful effects shifted from ecological damage to Lake Superior to potential health risks to the population of Duluth. Pp. 175-76.

141. *See supra* note 53 and accompanying text.

142. Professor Farber considers a $50 million expenditure to save a life to be a "bit extravagant," p. 87, and on that basis I am assuming he would consider $125 million to accomplish the same task to be grossly disproportionate.

143. Fear of products liability awards in excess of $375 million might convince Microsoft to act in any event.

IV.

Three decades into the Environmental Era, our settled commitments respecting our relationship to the environment remain under construction. The years that come will continue to pose challenges, perhaps placing stress on the technological optimism and sense of relatively easily trade-offs that seem to underwrite much of our current attitudes and hence prevent us from getting a sure fix on them with respect to hard cases. Or perhaps not — perhaps our values will develop and shift in such a way that maximum feasible protection of the environment will be matched by changes in lifestyle expectations that make the ensuing distribution and production of goods and services largely acceptable.

In our present circumstances, a clear role exists for leadership in developing the ideas and principles necessary to disambiguate our commitments. After Abraham Lincoln had remarked upon the power of public sentiment in a democracy, he concluded his thought by adding, "Consequently, he who moulds public sentiment goes deeper than he who enacts statutes and pronounces decisions."[144] *Eco-pragmatism* does not succeed in convincing us that if we embraced its approach we would be simply acknowledging commitments already made, but it does succeed in making the hybrid approach seem plausible, and sheds much clearer light on complex topics along the way. By virtue of those successes, *Eco-pragmatism* enhances the case for such an approach in lieu of more thorough reliance on CBA, so that it will continue to play a part in the ongoing process of understanding and constructing our commitments.

144. Rivers, *supra* note 39, at 53.